

Scaled data based on original data using  
LM-79-08 Approved Method: Electrical and Photometric Measurements of Solid-State  
Lighting Products

Test Report Prepared for

Cooper Lighting Solutions

(formerly Eaton)

Brand: FAIL-SAFE

Report Number: P545364

Luminaire Tested: **FMR-12-2-LD4-1LO-35-UNV-93-94-EDD**

Issue Date: 6/15/2021

This test was performed under the Supervised Manufacturer's Testing Program. The results of this test have not been influenced by sources from within Cooper Lighting Solutions or from external interests.



**Test Information**

Test Method: LM-79-08  
Report Number: P545364  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2102-135-5)  
Test Lab: INNOVATION CENTER  
Issue Date: 6/15/2021  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: FAIL-SAFE  
Catalog Number: FMR-12-2-LD4-1LO-35-UNV-93-94-EDD  
Description: 1X2 FMR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .187 CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 3500K CCT LEDS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

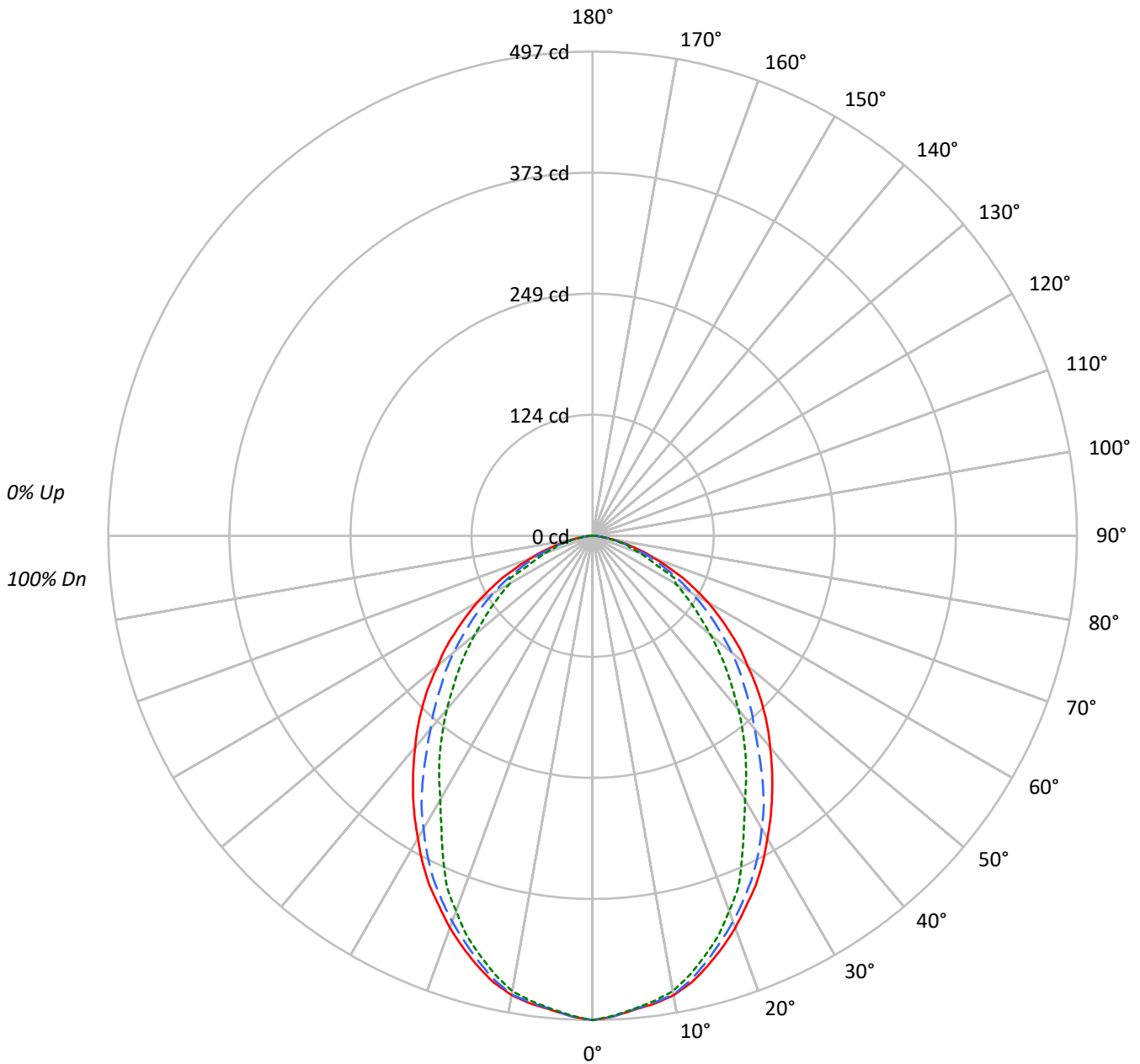
Lumens per Lamp: N/A  
Luminaire Lumens: 976.0 lumens  
Efficiency: N/A  
Efficacy: 83.4 lumens/watt  
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15  
Luminous Opening: Rectangular (W 1' x L: 2' x H: 0')  
CIE Type: Direct

Input Watts (W): 11.7  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT

TEST NUMBER: P545364

CATALOG NUMBER: FMR-12-2-LD4-1LO-35-UNV-93-94-EDD

### Luminous Intensity Polar Plot





TEST NUMBER: P545364

CATALOG NUMBER: FMR-12-2-LD4-1LO-35-UNV-93-94-EDD

**COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:**

RF	20									20									20									20									
RC	80									50									30									10									0
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	50	30	10	0																
RCR																																					
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100																			
1	110	106	102	99	108	104	100	97	100	97	94	96	94	91	92	90	89	87																			
2	101	94	88	83	99	92	87	82	89	84	80	86	82	78	83	79	77	75																			
3	93	84	77	71	91	82	76	70	79	74	69	77	72	68	74	70	67	65																			
4	86	75	67	61	84	74	66	61	72	65	60	69	64	59	67	62	58	56																			
5	80	68	60	54	78	67	59	53	65	58	53	63	57	52	61	56	52	50																			
6	74	62	53	48	72	61	53	47	59	52	47	57	51	47	56	50	46	44																			
7	69	56	48	43	67	56	48	42	54	47	42	53	46	42	51	46	42	40																			
8	65	52	44	38	63	51	44	38	50	43	38	49	42	38	48	42	38	36																			
9	61	48	40	35	59	47	40	35	46	39	35	45	39	34	44	38	34	33																			
10	57	44	37	32	56	44	37	32	43	36	32	42	36	32	41	36	32	30																			

**AVERAGE LUMINANCE (cd/sqm):**

	0°	45°	90°
0°	2676	2676	2676
5°	2639	2636	2633
10°	2617	2613	2594
15°	2546	2520	2485
20°	2452	2413	2347
25°	2352	2301	2157
30°	2229	2158	1943
35°	2111	1994	1798
40°	1991	1817	1636
45°	1877	1680	1479
50°	1737	1559	1319
55°	1607	1413	1181
60°	1473	1262	1058
65°	1295	1105	937
70°	1067	968	796
75°	848	740	778
80°	570	533	499
85°	352	426	494



TEST NUMBER: P545364

CATALOG NUMBER: FMR-12-2-LD4-1LO-35-UNV-93-94-EDD

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	46.3	4.7
10°-20°	127.0	13.0
20°-30°	175.8	18.0
30°-40°	187.5	19.2
40°-50°	171.0	17.5
50°-60°	134.0	13.7
60°-70°	87.3	8.9
70°-80°	38.7	4.0
80°-90°	8.3	0.8
90°-100°	0.0	0.0
100°-110°	0.0	0.0
110°-120°	0.0	0.0
120°-130°	0.0	0.0
130°-140°	0.0	0.0
140°-150°	0.0	0.0
150°-160°	0.0	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-30°	349.1	35.8
0°-40°	536.6	55.0
0°-60°	841.7	86.2
0°-90°	976.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	976.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	497	497	497	497	497	
5°	488	488	488	487	487	46
15°	457	457	452	448	446	128
25°	396	394	387	374	363	182
35°	321	319	304	280	274	201
45°	247	241	221	202	194	190
55°	171	166	151	133	126	154
65°	102	96	87	88	74	100
75°	41	38	36	34	37	44
85°	6	6	7	8	8	8
90°	0	0	0	0	0	



TEST NUMBER: P545364

CATALOG NUMBER: FMR-12-2-LD4-1LO-35-UNV-93-94-EDD

**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	497.2	497.2	497.2	497.2	497.2
2.5°	493.7	493.7	493.7	493.1	493.1
5°	488.5	488.0	488.0	487.4	487.4
7.5°	484.5	483.9	483.4	482.8	481.6
10°	478.8	478.8	478.2	475.3	474.7
12.5°	469.6	469.0	466.7	462.7	461.5
15°	456.9	456.9	452.3	447.7	446.0
17.5°	443.1	442.6	436.8	432.2	429.9
20°	428.2	427.0	421.3	413.8	409.8
22.5°	411.5	411.5	404.6	394.9	390.8
25°	396.0	393.7	387.4	373.6	363.2
27.5°	378.2	374.7	367.8	348.3	336.2
30°	358.6	356.9	347.2	321.9	312.7
32.5°	340.3	337.4	327.0	300.6	293.1
35°	321.3	319.0	303.5	280.5	273.6
37.5°	302.3	299.4	279.9	261.5	252.9
40°	283.4	279.9	258.6	242.0	232.8
42.5°	265.5	260.9	240.2	222.4	212.1
45°	246.6	241.4	220.7	202.3	194.3
47.5°	227.6	223.0	204.0	185.1	175.9
50°	207.5	203.5	186.2	167.3	157.5
52.5°	190.8	184.5	167.8	148.9	140.8
55°	171.3	166.1	150.6	132.8	125.9
57.5°	153.5	148.3	133.9	117.2	111.5
60°	136.8	129.3	117.2	102.9	98.3
62.5°	118.4	112.7	102.3	90.2	96.0
65°	101.7	96.0	86.8	88.5	73.6
67.5°	83.3	80.5	72.4	64.4	62.1
70°	67.8	64.4	61.5	52.9	50.6
72.5°	54.0	50.6	46.6	42.0	40.2
75°	40.8	37.9	35.6	33.9	37.4
77.5°	28.2	27.0	25.3	23.6	23.0
80°	18.4	17.8	17.2	16.7	16.1
82.5°	10.9	10.9	10.9	10.9	10.9
85°	5.7	6.3	6.9	7.5	8.0
87.5°	3.4	3.4	4.0	4.6	5.2
90°	0.0	0.0	0.0	0.0	0.0



Report Generated By 670246072 / DESKTOP-MV3F9LC







— 0°-180°    - - 45°-225°    - - - - 90°-270°







(END OF REPORT)